ACCU-SCOPE ISC366 Excelis HDMI USB Microscope Camera Instructions

Contents

ACCU-SCOPE ISC366 Excelis HDMI USB Microscope Camera

Product Information

The product is an Excelis HD microscope with CaptaVision software. It is equipped with measurement capabilities and allows for calibration to accurately measure objects.

Product Usage Instructions

1. Place the stage micrometer on the microscope stage under the CAPTURE tab.
2. Focus and adjust exposure to obtain the sharpest image.
3. Click on the Zoom Fit icon located on the far right screen tab. This setting should be used for all measurements.
4. Toggle the Show Scale Line option to display or hide the scale line on the picture.
5. Create a calibration file by clicking on the Calibrate option. This allows you to add, edit, and delete calibration files.
6. Adjust the calibration table decimal precision. The range allowed is from 0 to 7.
7. View all the measurement data in the Measurement List.
8. Create multiple layers to apply measurements and save layer information under the Layer option.
9. Delete all measurements and layers using the Delete All option.
10. Unlock or lock the measurement operation using the UnLock/Lock option. By default, it is locked.
11. Select a measurement or change the position of the measurement data using the Select option.
12. Measure the length of a line using the Line option.
13. Measure the distance between parallel lines using the Parallel option. You can perform multiple parallel distance measurements by double-clicking to end each measurement.
14. Measure the length of perpendicular lines using the Perpendicular option. You can perform multiple perpendicular length measurements by double-clicking to end each measurement.
15. Measure the height, width, area, and perimeter of a rectangle using the Rectangle option.
16. Draw a circle using the 2-points Circle, 3-points Circle, Diameter Circle, or Concentric Circle options. These options provide the radius, area, and perimeter of the circle. You can perform multiple concentric circle measurements by double-clicking to end each measurement.
17. Measure the area and perimeter of a polygon using the Polygon option.
18. Measure the angle of a curve using the Arc option. This option provides the angle, radius, and length of the curve.
19. Measure angles using the Angle option.

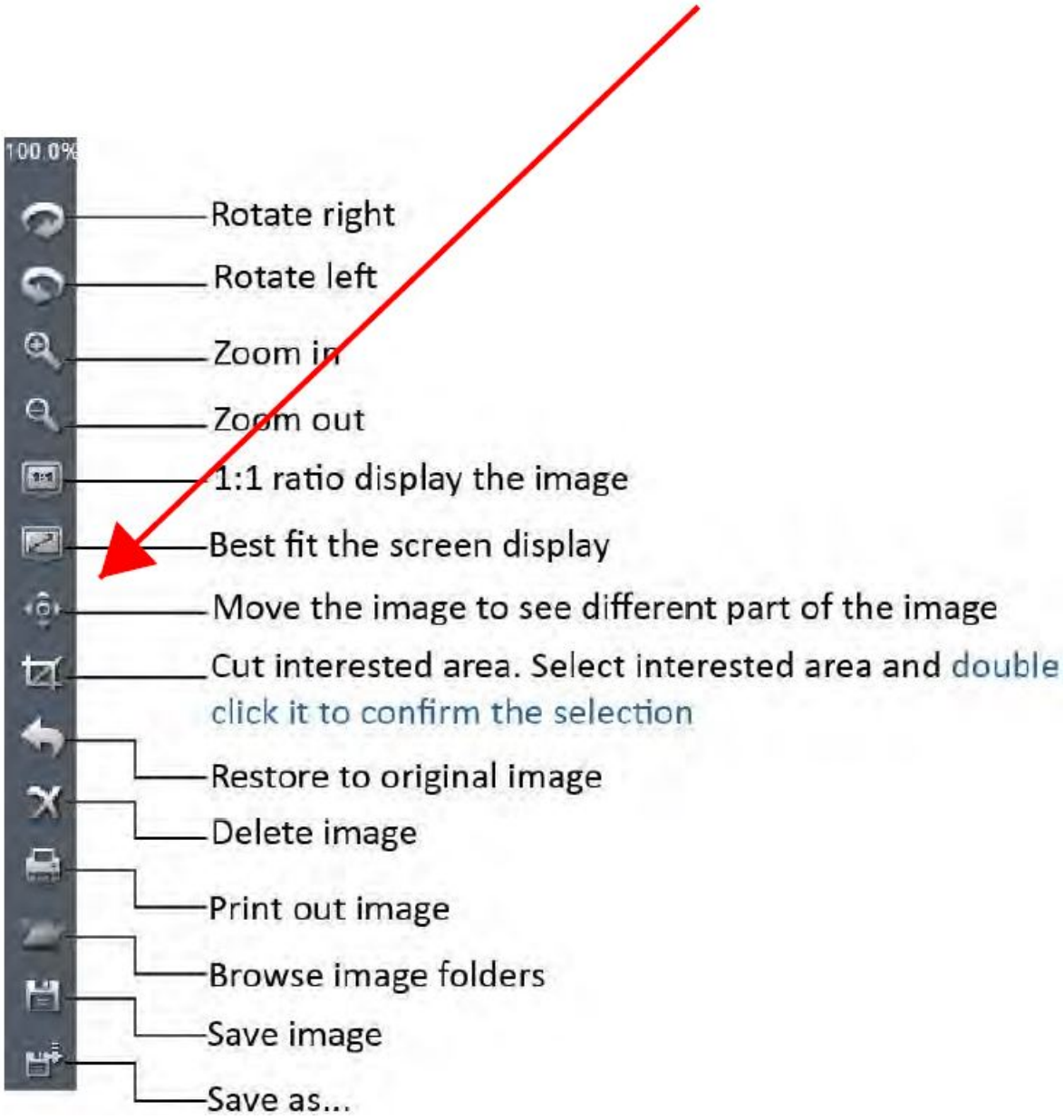
20. Use the Point option as a counter to count quantities.
21. Add remarks on the images using the Annotate option.
22. Delete previous measurements by selecting them and clicking on the Delete option.
23. Toggle the cross-ruler on or off on the images using the Cross-ruler option. The unit of the ruler depends on the applied calibration file.
24. Edit the properties of the scale line by double-clicking on it. You can edit its scale character, frame, length, and name.
25. To measure the real size of samples, you need to create a corresponding calibration file.
    1. Take pictures of the calibration slide with all the required working objectives and resolution. If a reducing lens is used, take pictures with the calibration slide and reducing lens attached.
    2. If only one objective and one resolution are used, one calibration slide picture is enough. The calibration slide picture must be taken with exactly the same lens or microscope settings as the target image taken.
    3. Click on the Create Calibration File option to start creating the calibration file.

Calibration Instructions

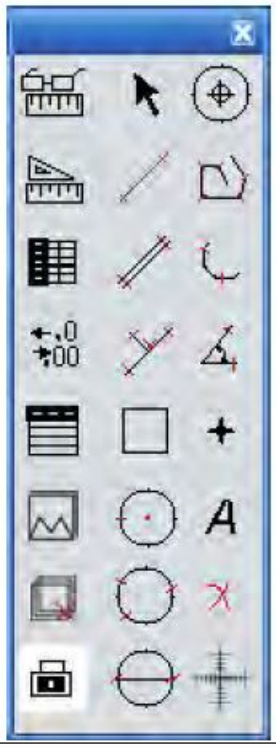
How to Calibrate the Microscope for Measurement Using CaptaVision Software

1. Under CAPTURE tab, place stage micrometer on microscope stage.
2. Focus and exposure adjust for sharpest image.
3. On far right screen tab, CLICK “Zoom Fit” icon  .

Use this setting for all measurments


100.0%
Rotate right
Rotate left
Zoom in
Zoom out
1:1 ratio display the image
Best fit the screen display
Move the image to see different part of the image
Cut interested area. Select interested area and double click it to confirm the selection
Restore to original image
Delete image
Print out image
Browse image folders
Save image
Save as...

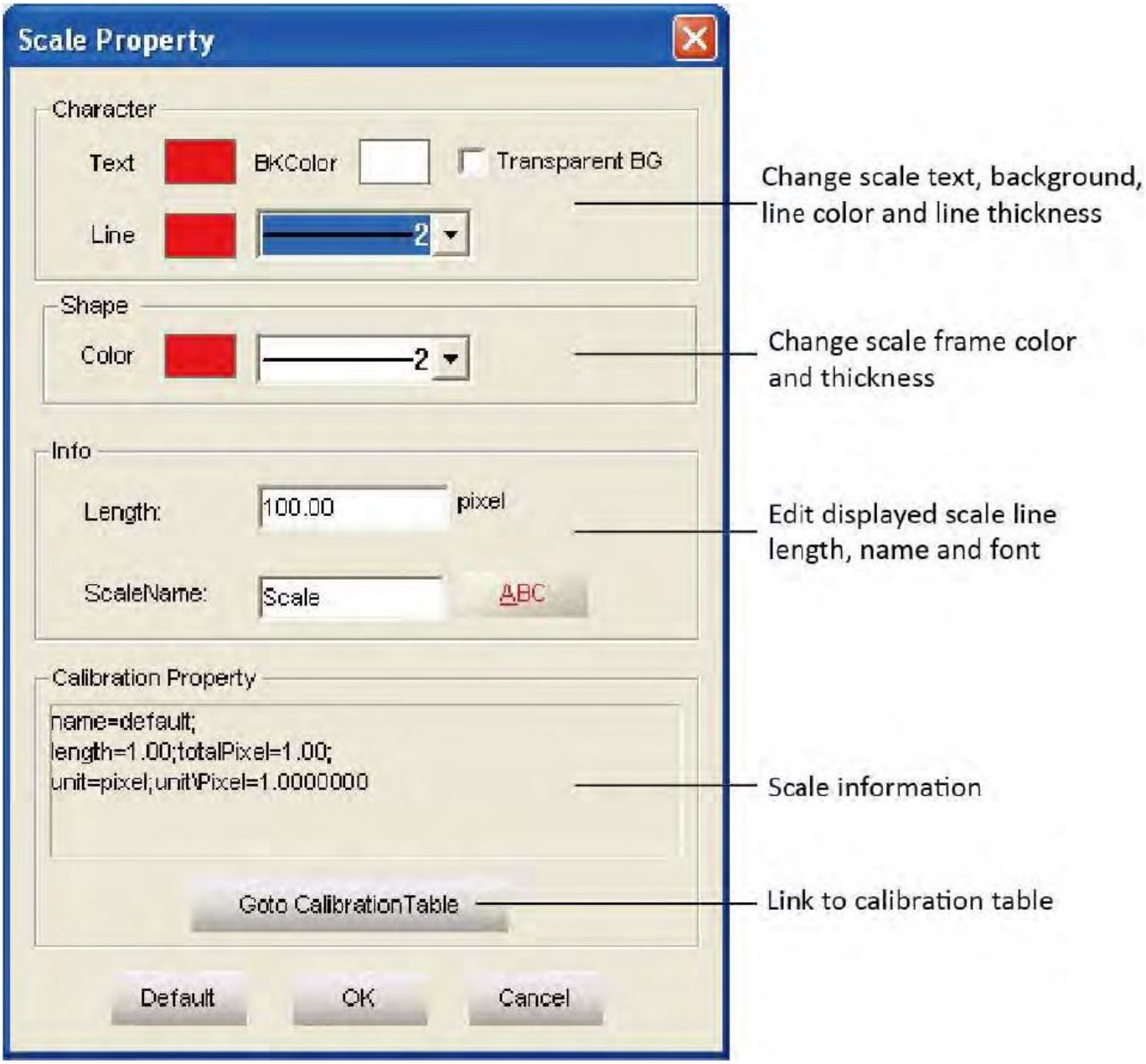
TOOLS



	Show Scale Line	On/off the scale line on the picture
	Calibrate	Create Calibration file
	Calibrate Table	Available calibration file list. Allow to add, edit and delete calibration file.
	Decimal	Set measurement precision. Allowed decimal range is from 0 to 7
	Measurement List	List all the measurement data
	Layer	Create multiple layers to apply measurements and save layer information
	Delete All	Delete all the measurements and layers
	UnLock/Lock	Unlock/lock the measurement operation. Allow to do same measurement continually when LOCKED. It is locked by DEFAULT.
	Select	Select to change measurement or the measurement data position
	Line	Measure the length
	Parallel	Measure the distance of parallel. Allow to do multiple parallels' distance measurement. Double clicking to end

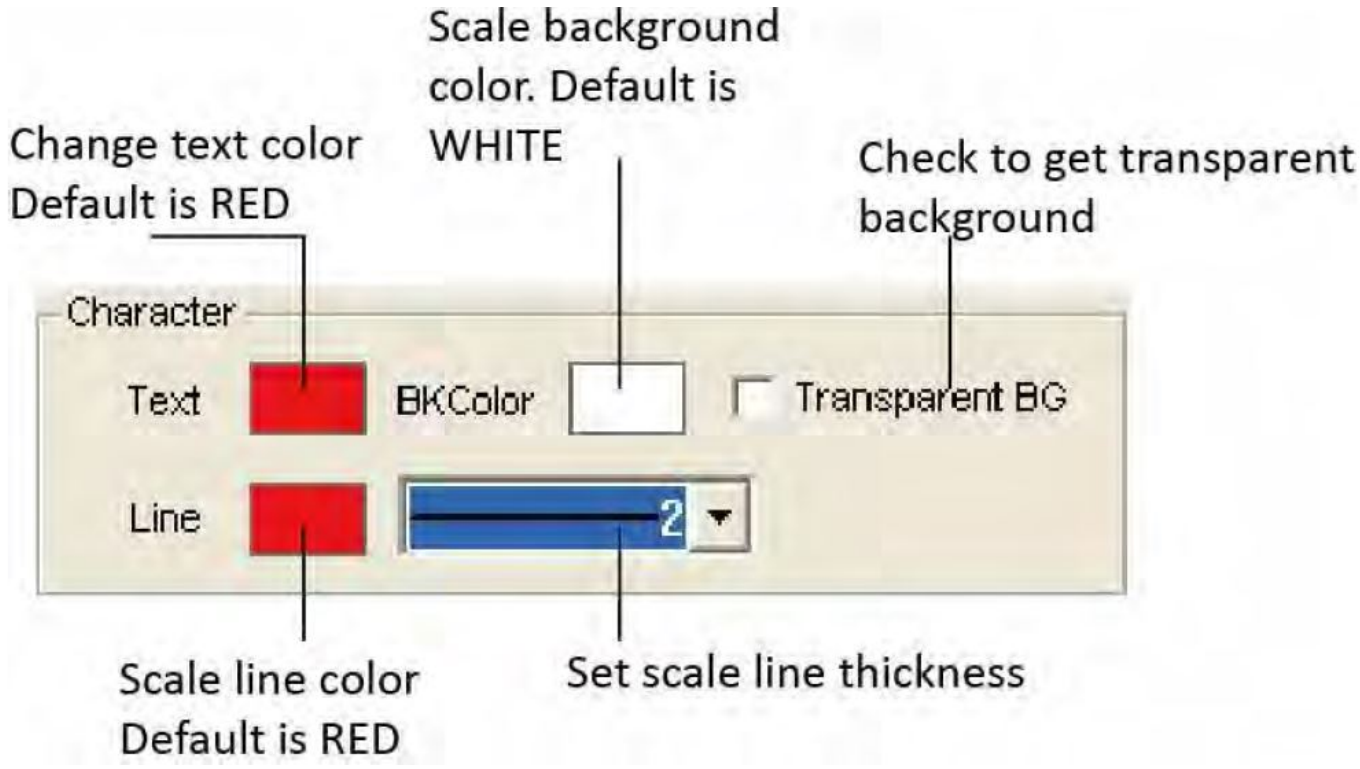
		parallel measurement.
	Perpendicular	Measure the perpendicular length. Allow to do multiple perpendiculars' length measurement. Double clicking to end perpendicular measurement.
	Rectangle	Measure rectangle height, width, area and perimeter.
	2-points Circle	Use center point and point on the circle to draw a circle. Give the radius, area and perimeter of circle
	3-points Circle	Use 3 points on the circle to draw a circle. Give the radius, area and perimeter of circle
	Diameter Circle	Draw a circle according to the diameter. Give the radius, area and perimeter of circle
	Concentric Circle	Use center point and radius to draw concentric circles. Give concentric circles' radius, area and perimeter. Allow to do multiple concentric circles measurement. Double clicking to end concentric circles measurement
	Polygon	Measure polygon area and perimeter.
	Arc	Measure a curve angle, radius and length.
	Angle	Measure the angle
	Point	Counter. Count the quantity.
	Annotate	Add remarks on the images.
	Delete	Delete previous measurement. Select it then click on the measurement to delete the measurement.
	Cross-ruler	On or off cross-ruler on the images. The unit of the ruler depends on the applied calibration file.

Edit Scale Line

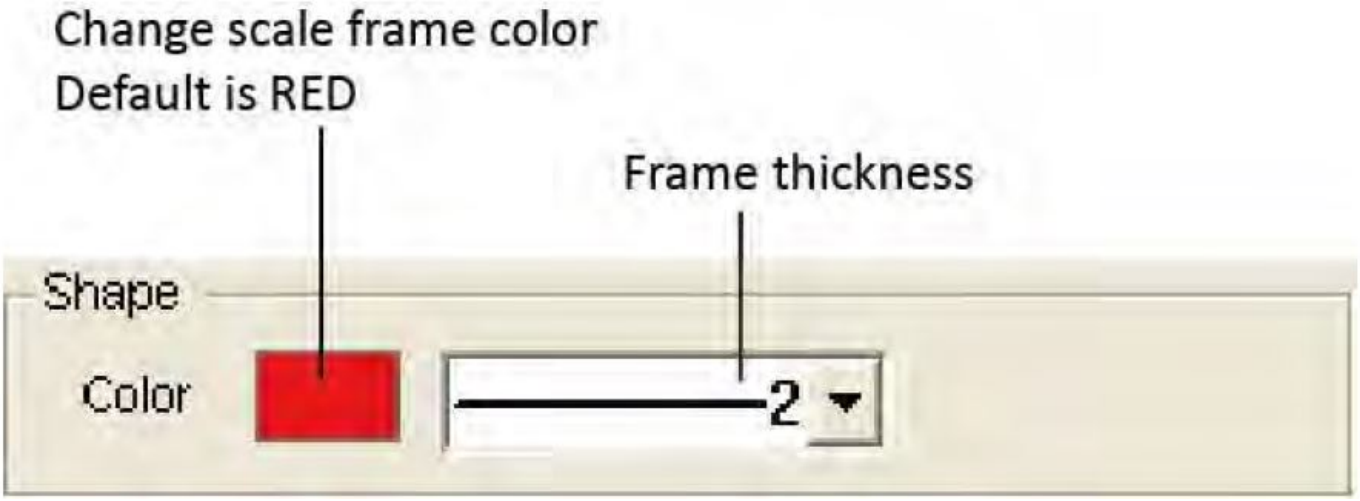


- Double click on the scale to get its properties and make changes to it.

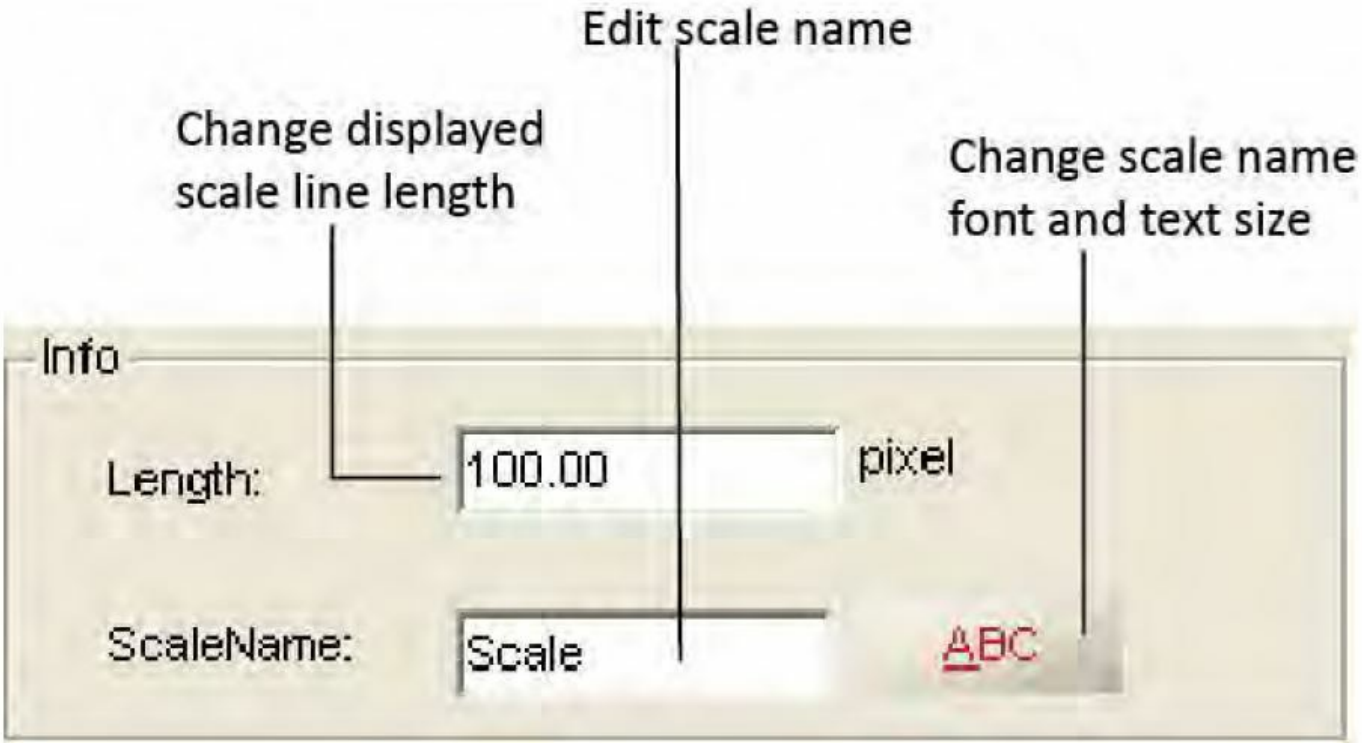
Edit scale character



Edit the frame of the scale



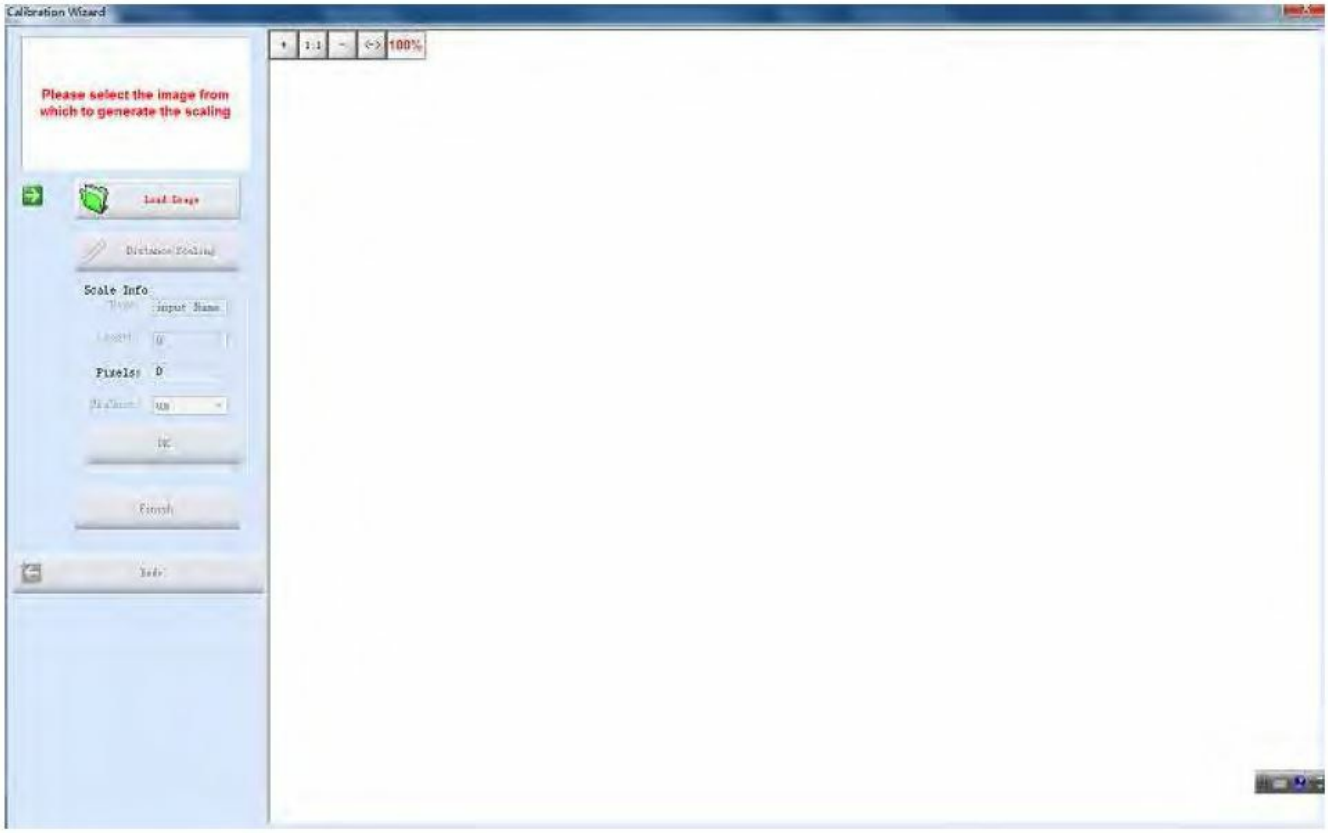
Edit scale line length and name



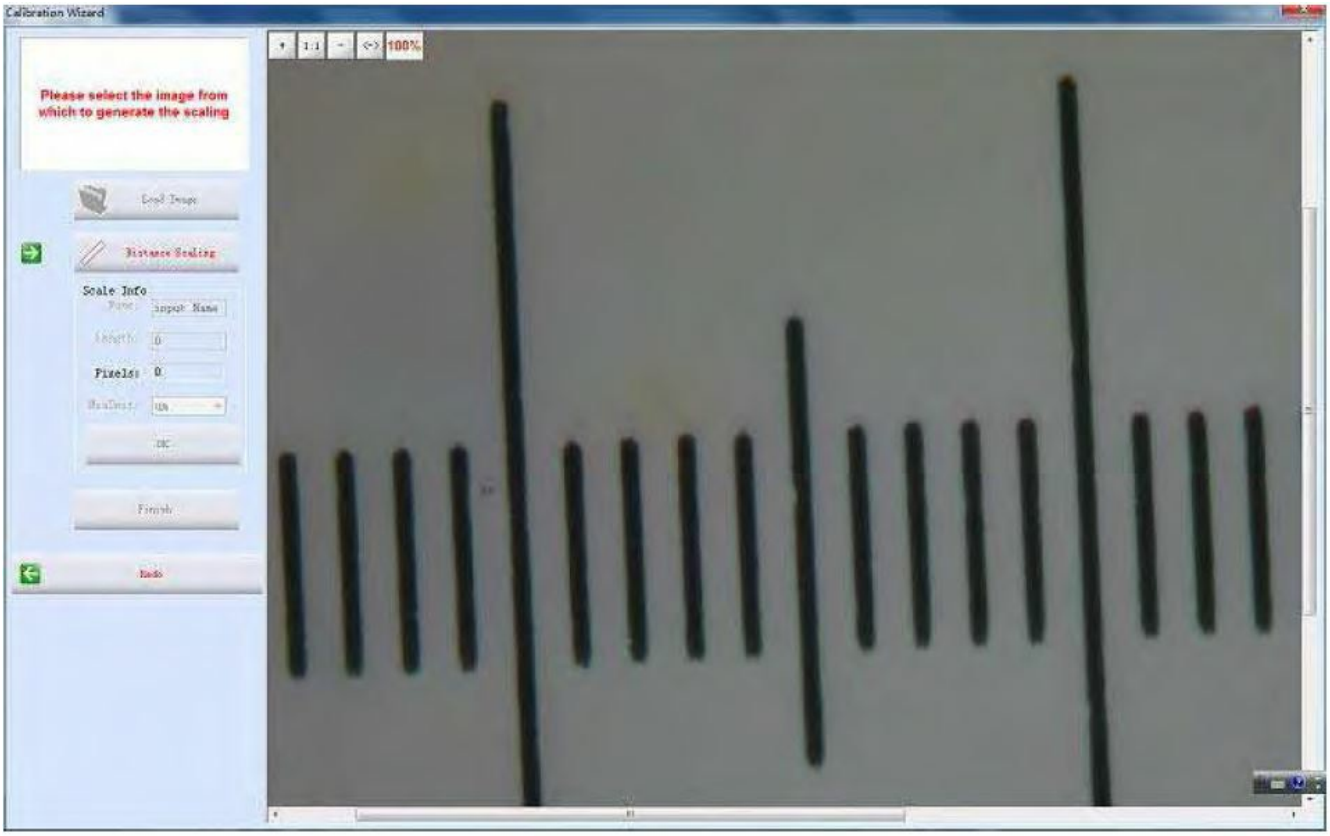
Create Calibration File

To measure the samples real size, the corresponding calibration file needs to be created first.

1. Take pictures of the calibration slide in all the required working objectives and resolution (if a reducing lens is also used in your application, it also requires you to take the calibration slide picture with the reduce lens attached).
    -  If ONLY ONE objective and ONE resolution is used in the application, one calibration slide picture is enough. The calibration slide picture MUST be taken with exactly the same lens or microscope settings as the target image taken.
2. Click  to start to create calibration file.

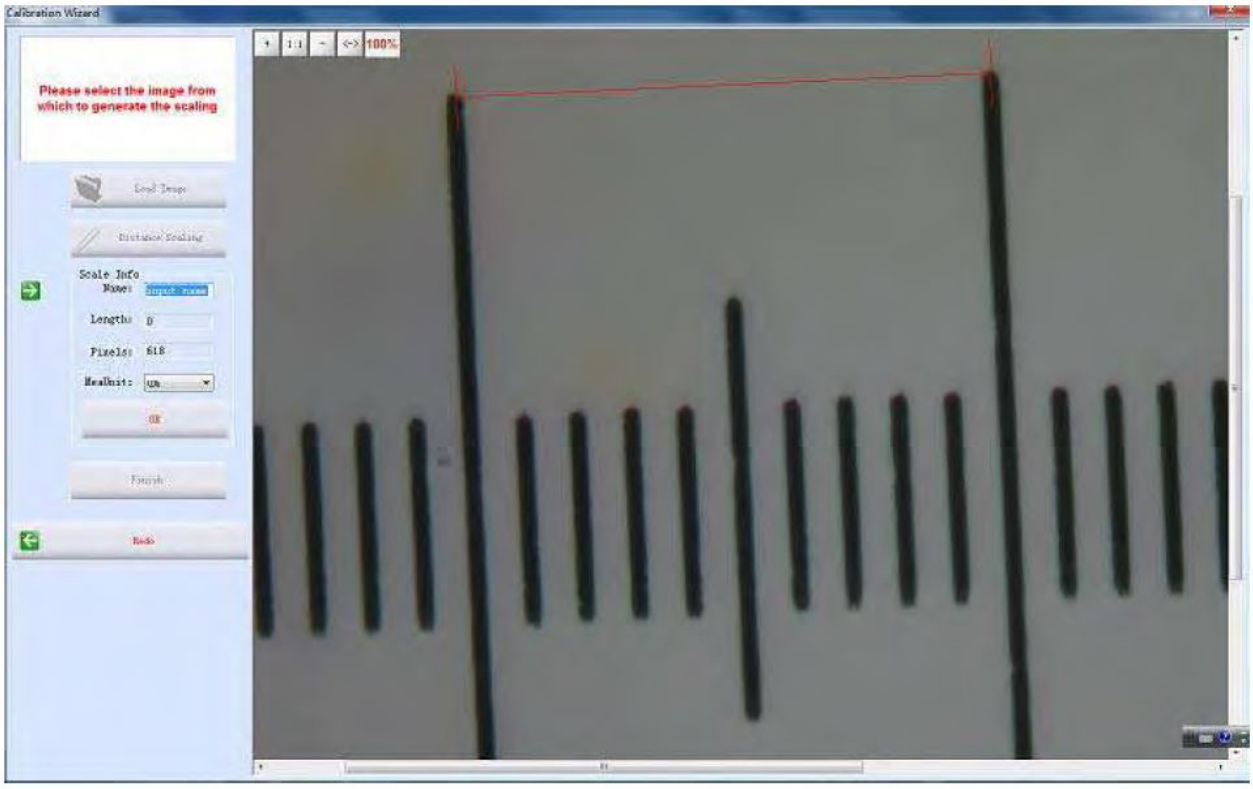


3. Click [Load Image] to load the calibration slide picture taken in Step1.



4. Click [Distance scaling] and move the cursor to the slide image, draw a line to get the reference length.

- Using longer length as the reference length will give more accurate measurement results. For example, using 10 scale units as reference length will give more accurate result than using 1 scale unit.

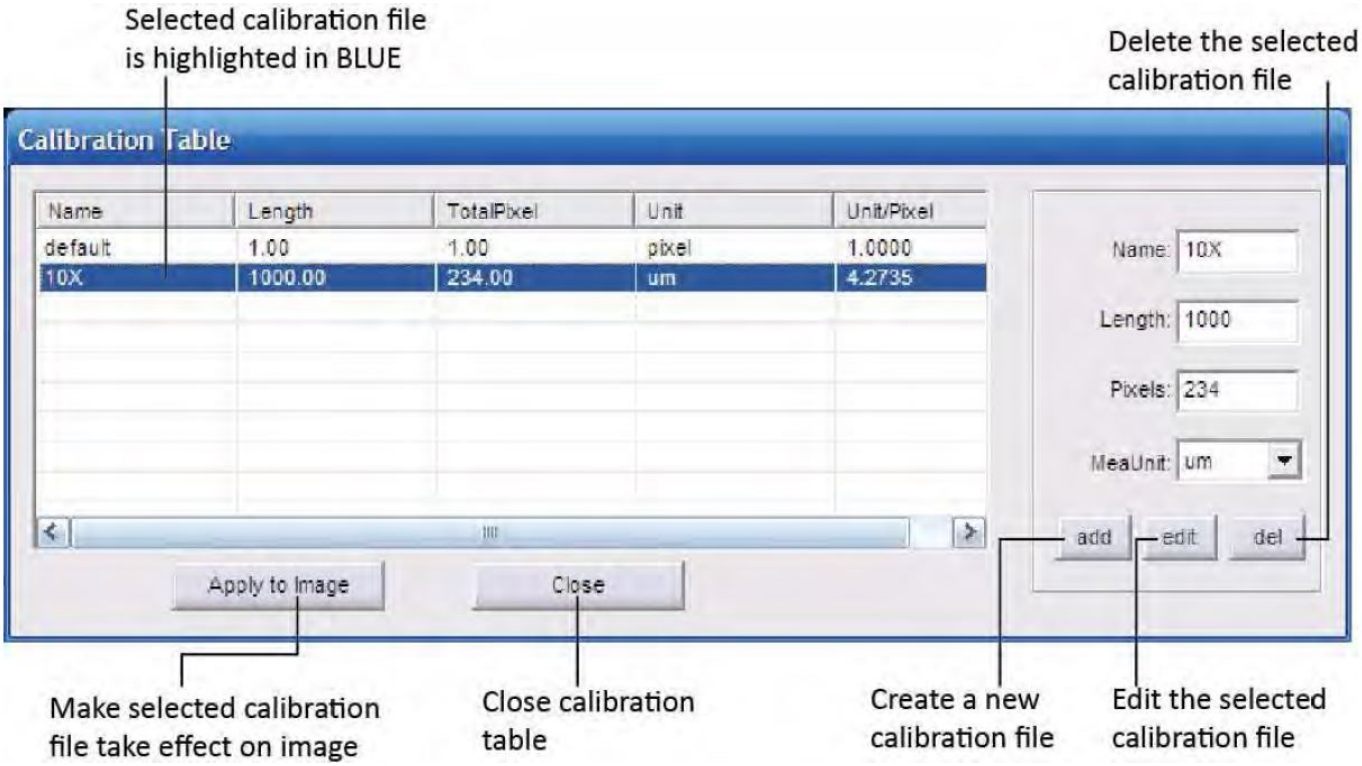


5. Enter the name for the calibration file and the length of the line you draw.

- If you need more than one calibration file, using objective+reducing lens(if it is used)+resolution as the name of the calibration file is recommended. This can help to prevent using the wrong file to do the calibration.
- When keying in the length, please pay more attention to the calibration scale unit and the Measure Unit used here. For example, the calibration scale unit is 0.1mm; the Measure Unit is selected as μm; and the reference length is 10 scale units, so the length should be 10 x 0.1mm x 1000 = 1000 μm.

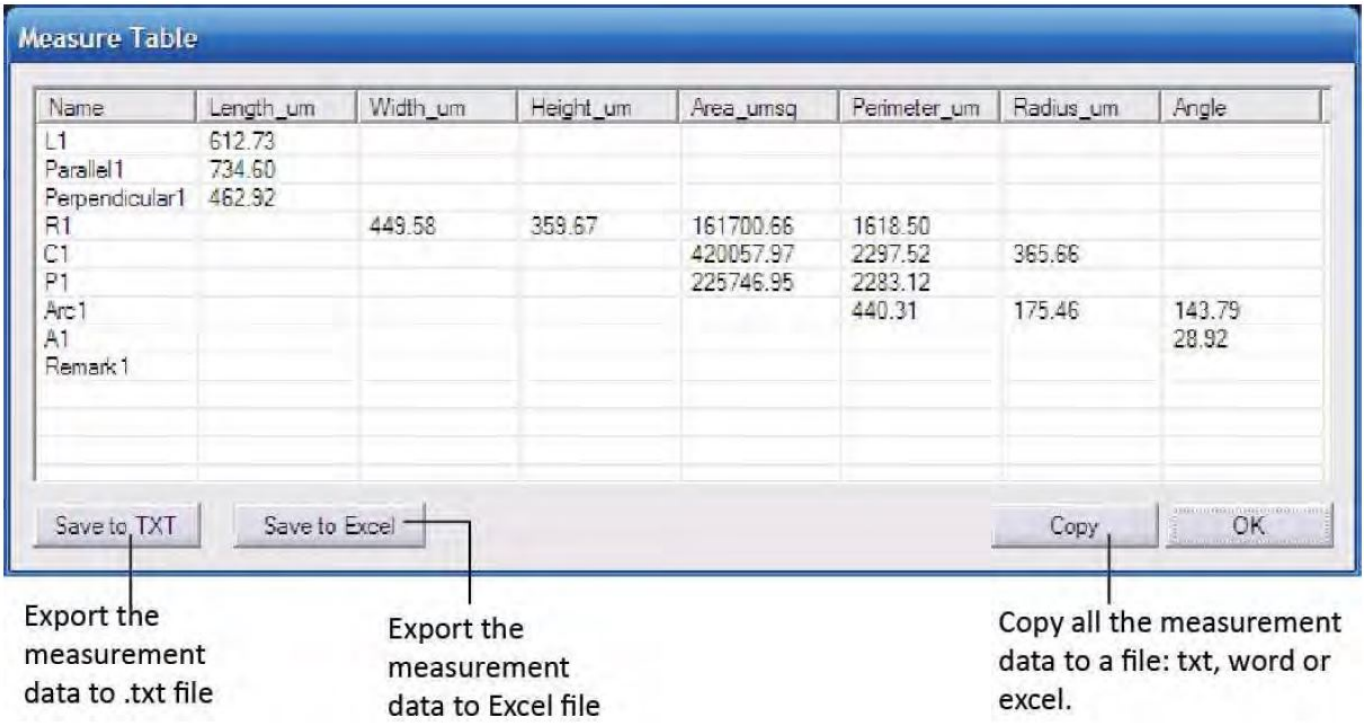
6. Click [OK] to confirm the calibration. The new calibration file named “10X” is created in the [Calibrate Table].

Calibration Table



- Click  [Calibrate Table] to open the calibration table.
- Select the correct calibration file for current image measurement.
-  Using the WRONG calibration file will make the measurement result innacurate. Please make sure the calibration file is correctly corresponding to the current image. Hence, it is useful to name the calibration file with the capturing settings or objective name.

Measurement List



All the measurement data is listed in the [Measurement List]. The software allows you to export all the measurement data to TXT or Excel file.

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Documents / Resources

	ACCU-SCOPE ISC366 Excelis HDMI USB Microscope Camera [pdf] Instructions ISC366 For Excelis HD, ISC366, For Excelis HD, Excelis HD, ISC366 Excelis HDMI USB Microscope Camera, ISC366, Excelis HDMI USB Microscope Camera, HDMI USB Microscope Camera, USB Microscope Camera, Microscope Camera, Camera

References

- Oscilloscope | Keysight
- Accu-Scope
- Unitron USA